

Episode 45: Watchful Waiting

Chris Dall: [00:00:05] Hello and welcome to the Osterholm Update: covid-19, a weekly podcast on the covid-19 pandemic with Dr. Michael Osterholm. Dr. Osterholm is an internationally recognized medical detective and director of the Center for Infectious Disease Research and Policy, or CIDRAP, at the University of Minnesota. In this podcast, Dr. Osterholm will draw on more than 45 years of experience investigating infectious disease outbreaks to provide straight talk on the covid-19 pandemic. I'm Chris Dall, reporter for CIDRAP News, and I'm your host for these conversations.

Chris Dall: [00:00:42] Earlier this week, the United States passed a pandemic milestone that would have seemed unimaginable a year ago- five hundred thousand deaths. More Americans died in one year of the covid-19 pandemic than in two world wars and the Vietnam War combined. The immensity of that number and all the people who have been impacted by those deaths is staggering. "The people we lost were extraordinary," President Joe Biden said in the ceremony to mark the grim milestone. We have to resist becoming numb to the sorrow. But while the nation processes the massive loss of life over the past year, more and more questions are being raised about what the coming year will look like. Covid-19 cases continue to decline in the US and around the globe, and more people are getting vaccinated. But coronavirus variants continue to spread and are threatening to reverse those gains. How do public health officials balance the public's desire to return to normal, especially among those who have been vaccinated, with the need to remain vigilant against another surge? On this February twenty fifth episode of the Osterholm Update, we'll discuss the growing questions about how we define the new normal and what people can do and can't do once they're vaccinated and how the variance will affect that equation. We'll also talk about the impact of covid-19 vaccines and discuss a new CIDRAP viewpoint on the US vaccine deployment in anticipation of a B117, and we'll highlight another pandemic act of kindness. But first, we'll begin with Dr. Osterholm's welcome and dedication.

Michael Osterholm: [00:02:06] Thank you, Chris. Welcome, everyone, to another edition of the Osterholm Update. So good to have you with us. We appreciate very much the time that you spend listening to this podcast and for sharing all that you do with us about the podcast, about what goes on in your lives, your questions, your concerns, your ideas, your hopes, your dreams, thank you so very, very much. This is

very meaningful to all of us. And I tell you that there are weeks that we can use your comments more than you know to help us get through that week. This is one of those weeks. I don't know how to even begin to try to put some kind of a human sense around the number of five hundred thousand deaths. We've talked about this time and time again about numbers are not people. People are brothers and sisters, father, fathers and mothers, aunts and uncles, grandpa and grandmas, colleagues. That we must never forget. But the epidemiologist in me, looking at how do I try to bring some sense of the significance of this number to all those I didn't know, to all those fathers and mothers and grandfathers and grandmothers. I thought about it this way. If you take those five hundred thousand very special individuals by name, and I take three seconds to say their name with respect, I can say 20 names in one minute. But it would take me four hundred and seventeen hours or 17.4 days, twenty four hours a day to read each one of those names. Think about that. Four hundred and seventeen hours reading one name every three seconds. That is the breadth, the depth and the pain that this pandemic has caused us. So I hope we focus on that today, focus on the names, say their names, say what they meant to you, see their faces, see the faces of their loved ones they left behind. That's what we have to remember today as we start this podcast, but it's also a time where we have to move forward, we have to remember, but we also have to look to that future. And I'm very happy to report to you today from the great city of Minneapolis that on February 25th, there will be exactly 11 hours of sunlight. We've gained twenty one minutes since last week. We've gained now two hours and 14 minutes since that December 21st winter solstice. And each week, the numbers are going to get bigger faster as we get closer and closer to spring and into the summer. So that's what we have to also remember as we go forward, remembering the names and celebrating the light. This has been a tough week in the United States for those living in the southern states, particularly in the state of Texas. It has been a tragedy to watch what's happened with the weather, the number of people who have had a devastating impact in their lives with frozen pipes, lack of electricity, frostbite, deaths due to hypothermia, damage to their properties that have been so substantial. So this week I dedicate this podcast to all of you who have been living through the horrible, horrible situation of the weather in Texas and the other adjoining southern states. Our thoughts are with you. We wish you well and know that recovery will not happen overnight. But let's get on with recovery, just like we need to do that with all of our lives relative to this pandemic. On our way to recovery. We've titled this week's episode Watchful Waiting. That's where we are right now. Yes, we are tending to the business of getting people

vaccinated and we're urging the public that we still must follow the risk reduction measures we've been advocating for the past year. We're also watching and waiting. And we're watching and we're waiting. Still feeling that lingering fear of what we've been through, but what may still lay ahead. We're hoping the main thrust of the pandemic in the US could very well be behind us as vaccinations continue here, oh do we. But we fear what could develop in the next month or two, which is a whole new surge related to the new variant B117. As you know, it first took off in the U.K. just a few months ago. Last month, we established the metaphor in this podcast of an approaching hurricane of Category five strength. And we've kept with it because I believe it so aptly fits our current situation. We're on that beach again. We've got hit by some severe weather in the weeks gone by, but the clouds have parted. It's sunny, no clouds, only a slight breeze, everything looks great. And after a long period of sheltering, we've earned the right to come out and catch our breath, at least for a little bit. But not completely. No, not completely. The hurricane warnings still in place, everyone. And enough of the science is telling us that the real hurricane is continuing to approach, that we have to take this threat very, very seriously. It's now just one hundred and fifty miles away, a lot closer than it was a few weeks ago. We need to do two things. One, catch our breath a bit for the sake of our mental health. Oh, we need to do that. But we also cannot let our guard down. So let's talk about the first bit, our mental health. Yes, the pandemic has been a nightmare, but now is the time for us to retain our sense of humanity. The pandemic doesn't have to spell an end to life as we knew it, we just need to figure out how to live with this virus, which is something I'll get into today. We have died by this virus. We have somewhat lived with this virus today. How do we really live with this virus moving forward? A critical item in today's episode is the news that we released Tuesday from CIDRAP regarding how we must prepare for that possible hurricane. This is our seventh major viewpoint report since the start of the pandemic. And quite possibly, it is our most important as we continue at CIDRAP to do our best to be a beacon of reliable information in a crazy storm of information of the past year. I'll talk more about our report later when we address the issue of delaying the second dose, we may save more lives in the weeks ahead. But now is the time for us to remember all those who died in this pandemic. And those who still might. We watch and we prepare for tomorrow with both caution and hope, and all I can say is nuts to this virus.

Chris Dall: [00:09:40] Mike, as we've been discussing in recent weeks, covid-19 cases and hospitalizations continue their steady decline here in the United States and around

the world, with the exception of a few hotspots. I know I've asked you this question several times, but do you have any more insight into what's behind this decline?

Michael Osterholm: [00:09:57] First of all, it's really important to validate that this decline is real. It's real. I'm not sure how reliable the numbers are these days relative to the actual number of cases. I've already laid this out before in terms of acute cases, infections reported through testing, we've got several factors taking place. We're hearing of more and more situations where state and local health departments, even within some medical centers, people are being diverted from testing programs to vaccination programs which in of themselves challenge how many people get tested. Second of all, we're hearing of people more often now wanting to get tested if they have mild symptoms because they don't want to be put in quarantine. They don't want to somehow be isolated relative to their infection. I can understand that personally. Obviously, that's a challenge for us to know what the numbers really mean. And then you have events, like I just mentioned, with regard to the weather in Texas. No doubt there has been great challenges in a state like Texas getting accurate testing results out of there for the past seven to 10 days. But with that, let me just be clear, this downward trend of cases is real. It's rather dramatic, but it still is at a baseline that is higher than the peaks we had in April and July. Today, as I talk to you about the cases, we are right there at the very, very peak of what we thought was a house on fire event in July of this past year. So we have to continue to remember that importance of shifting baselines and how we somehow become willing to accept, oh, we're way, way down when in fact we are at a high relative to what it was just six months ago. Now, one of the areas that I am looking at very carefully in terms of trying to understand what's happening with the epidemiology of covid-19 in the United States is not actual cases reported. I'm looking at hospitalizations and deaths. Those you don't really have an alternative. I'm not going to go to the hospital. I don't want to be tested. I'm not going to basically have the testing capability available. But now I need to be in the emergency room to get into the hospital. There you really have less of a filtering device going on in the community and you're more likely to really pick up that tip of the iceberg that then represents what's underneath the iceberg. The challenge with that is, of course, it's delayed. It's a lagging indicator. When we see a turnaround in the number of individuals hospitalized or deaths, that's often two to four weeks after the cases have occurred in themselves. So I worry that right now we don't have a precise way of understanding what's going on, more so than any time since the pandemic began, except for those early days when we

had no testing at all. So I think this is a challenge. What does it mean to see this big drop in cases? I've already talked about shifting baselines up and down, up and down. And sometimes when we see this downward trend or upward trend, we act as if it hadn't happened before and this is all brand new. This downward trend has happened three different times so far in this pandemic here in the United States. But what could be responsible for this rather sizable drop? And I've seen reports from many different so-called experts, they surely have training in various aspects of medicine and public health, ascribe many different reasons for why this has happened. But I am not convinced that they are right on any of them. And this is where the humility comes in. Please understand, take my comments in that same light. I have to tell you, challenge what I'm saying right now. But I hear over and over again it's seasonality. There are no data to support seasonality whatsoever. Why do I say that? Because look what's happening in the Southern Hemisphere countries also. And remember, the big decrease we're seeing in cases right now has largely come from the substantial burst in cases that occurred in the southern states in January. But those are the same states that were on fire in July. So if you're going to use humidity or temperature or whatever, there's just no consistency there whatsoever at all. When you see the southern hemisphere light up right now or the case numbers drop, that, too, would suggest, well, there isn't a northern southern hemisphere difference like we might see with influenza. And finally, let me just continue to remind you of what we see with influenza pandemics, and while I understand this is a coronavirus, I think there's lessons to be learned here. I've been studying pandemics for the last twenty five years of my life, trying to understand them. And now I'm sitting in the middle of one and I'm trying to bring together all that information that over the years I had the opportunity to review and understand. And as I pointed out in a previous podcast, there have been 11 influenza pandemics in the last two hundred and fifty years. Three started in our winter, three started in our spring, two started in our summer, and three started in our fall. If you look at every one of those for which we have any kind of real data, you can see that there was this initial wave or surge of cases, a peak that occurred at the time of the first movement of the virus in humans. And then that peak would just disappear, no human mitigation strategies, nobody was vaccinating, nothing. Why did that happen? Why did it just disappear? Look, no further than two thousand and nine with H1N1 when it appeared in March in Mexico, peaked in late April, decreased dramatically in May, was absent most of the summer, took off in the late August time period in the southern states when it was the hottest it had been all year. The peak climbed in North America through mid to late

September and dropped off precipitously in October, long before a vaccine arrived. Now, that's not seasonality, there was something else driving that and we have seen that kind of picture over and over again. The difference is with influenza, it then becomes a seasonal virus, sometimes after two or three years. It literally took 1918 H1N1 almost two years to become a seasonal virus from its up and down surges. I don't know what this means for the coronavirus, but I'm struck by the fact that there is something else going on. There is this viral interference. We are seeing almost no viral respiratory pathogens today in our pediatric population. If you go look at our hospitalization rates right now for kids, it is dramatically below what we've seen in recent years. If you look at influenza activity, same thing, way below what we would normally expect to see. Now, you can't say it's just because of mitigation, because, frankly, we haven't done all that well with mitigation with covid-19. Look at all the cases we've had. So if, in fact, it were just that, you would expect to see at least some activity with flu and with the other viral respiratory pathogens. So I think there is something going on here that Mother Nature is doing across a diverse area of the world that we just don't understand. And we have to acknowledge that. I just want to add one additional caveat. Some could take what I just said, meaning that, in fact, none of the mitigation strategies we're doing in public health make a difference because Mother Nature is doing it all on her own. And I think the data are compelling from events like 1918, from even here with covid-19 is that when we see these surges and you try to put into place mitigation strategies for distancing, for masking, to limit transmission, et cetera, they make a difference in terms of basically smoothing off that curve or shaving off that curve, which is a huge issue that is important. No one can take my comments as a reason to say that we shouldn't be doing mitigation when in fact we see these cases in our communities. But at the same time, let's just acknowledge with some humility, as I've said over and over again, we're not driving this tiger, we're riding it. And only when we have the world vaccinated and we can deal with the virus that way, then will I say we're driving it and riding it. In the meantime, I don't know why these surges are up and down. I just know that because I don't know why I surely can't give you any assurance that they're not going to happen again. Other reasons that people have raised for this curve dropping so precipitously is vaccination. Well, right now, only six percent of the US population has received two doses of the vaccine. Another 13 percent have received one dose. Those are hardly large enough numbers to suggest that they could have made this curve do what it did. Not saying it hasn't impacted on it, I think in long term care, we're going to start seeing some really immediate impact of reduced deaths in long term care. But it's

not vaccination. And again, risk mitigation, let me just be really clear, I know people want to say how compliant we are right now, how people are masking. We are seeing the single greatest change in risk mitigation recommendations and oversight that we've had since the pandemic began. Look what's happening right now, state after state restrictions are being lifted, restaurants are opening, bars are opening, gymnasiums are opening, funerals are now able to be at any number of people wanting to come, weddings. I can go through the laundry list of things that are happening. And I understand why, people want to get back to what they once had. And governors and mayors are caught in that vice of saying, "Well, I got to open up my economy." And so if you look at seasonality, nope. Risk mitigation as we're doing it, nope. Vaccination, nope. The only thing I have left is the unknown. And again, I come back to that and just say that that's all the more reason why I'm concerned about what could happen in the future, because as much as we think we know what this virus is going to do, we're in a chess match with it right now, and it's seeming to make moves that we've never seen before.

Chris Dall: [00:20:44] So what are you seeing on the variant front and specifically, do you still see the B117 variant becoming the dominant virus in the US by the end of March?

Michael Osterholm: [00:20:53] Well, let me remind all the podcast listeners and some of you may be new that when we talk about variants, we're talking about what has been many, many, many different viruses going back to the very first days of their emergence in humans. These are viruses that have gone through one or more mutations that then they either survive within human to human transmission or they get outcompeted by other sars-cov-2 viruses. What we're really concerned about are those variants to do one of three things. They, number one, are more transmissible. In some cases 30 to 70 percent more transmissible than previous viruses. Number two is they cause more severe illness, including hospitalization and deaths. And number three, they are able to evade the immune protection in an individual, either whether that arose through natural infection immunity or from vaccine related immunity. And those are what are really driving us today in terms of concern about what the variants can do. So the B117 variant, and now unfortunately it's being named a subgroup variant, meaning that of Kent or that of Bristol. Kent being the old B117, Bristol being the new B117, where it has now picked up the mutation that is of concern to us as it relates to evading immune

protection of the host. The variant that is the primary one in England, and what is circulating widely here in the United States is in fact the B117 Kent that does not have that mutation change that would allow it to escape the immune protection of either vaccination or natural disease. So where are we at in the United States? We're still flying pretty blind. This is a real challenge. As of February 21st, CDC is now reporting sixteen hundred and sixty one cases of B117 in forty four states. The Helix Dashboard, a dashboard of a company that does a great deal of sequencing reports that 14 percent of positive samples in Florida are B117 and 8 percent in California are B117. However, the California data lag by almost two weeks. If we look at Florida cases, there have been declining through January and February, although there may be a signal flattening the past few days. That would not be surprising, even with B117 present in that if you look at the European countries where this has taken off, there were actually weeks where B117 was beginning to circulate where case numbers continued to drop before they suddenly surged. As I mentioned, the Bristol variant, which is the B117 variant that also has this 484K mutation the one we talked about evading immune protection has now been reported in the United States. The first case was reported to CDC on February 17th. But it still is basically a very, very rare finding. The UK now has reported twenty one cases of this variant, but the vast majority remain the Kent variant, the one without that mutation. Just to summarize, in the United States, we are seeing B117 continuing to spread geographically, I believe it's in all 50 states now, it's just a matter we haven't been able to find it because of the lack of sampling. And in some areas, such as in Florida and California, the numbers are increasing at that rate of doubling roughly every 10 days. This is the challenge we have before us. If you look at what's happened in the other countries of Europe and the Middle East, I think it's very instructive what might happen here. So let me just spend a moment on that to give a sense of what we could see happening here. If you look in the United Kingdom right now, more than 90 percent of the samples being sequenced there are B117. Ninety percent. As you know, the UK is still in a lock down. Schools and non-essential businesses are still closed. Daily cases from before the holidays have dropped from sixty thousand per day to now about eleven thousand per day. Seems to be stabilized the past few days. That's a big drop, but it's literally taken them a month of a total lockdown and the additional vaccination to get them to this point. Hospitalizations are still declining, but they remain high at about eighteen thousand, which is just slightly below the UK spring peak last year of twenty one thousand and is still above their November peak, which was the first one they had of seventeen thousand. They are

starting to discuss cautious step by step reopenings, starting with the reopening of primary and secondary schools on March 8th. Again reminding you they've been closed, they've been closed since mid-December. So it gives you a sense of what this is really all about and what's happening in the United Kingdom to deal with this. If one looks at Denmark now, over 50 percent of the cases in Denmark are B117. The country remains largely in a lockdown, although recently they've reopened daycares and elementary schools. Why is that important? Well, it's important if one looks at the fact that they've reported outbreaks in at least two schools, sixty nine total cases in eight day care facilities, including 20 total cases after they've reopened. This is a challenge we talked about before, will B117 even cause more transmission to potentially occur in a school that didn't happen before? Denmark is still considering further reopening beginning March 1st, which they would likely involve more school reopenings and some shops with restricted capacity. Many of the health officials there have said publicly they're very wary of reopening warning of an April wave if reopenings aren't literally limited. Now, they've been struggling with this, too, for weeks and weeks. Cases in Germany are now down to about seven thousand five hundred today from their winter peak of twenty six thousand a day. But they're showing now new signs of increase. More than twenty five percent of the cases in Germany are B117, and that number is increasing. A number of health officials have been cited in the media as saying that B117 is spreading rapidly and now they're doubling every week. And non-essential businesses are still closed in Germany and has limited private gatherings to a max of just two households. Some officials are feeling it's too early to lighten these restrictions. And you can see again how they're struggling. Daily cases are rising in the Czech Republic, about nine thousand five hundred new cases a day, although they haven't reached their peak recorded during the January peak. But now it's because what they're seeing is additional spread to B117. And they're attributing this turnaround where they had a peak, dropped, but coming back up again to this. The Netherlands daily cases are rising there. They're at four thousand, although they're still down from the December peak. And the Netherlands is still in a lockdown with non-essential businesses closed and gatherings restricted. And this is expected to be extended. They've also had shortage of hospital beds where they've actually had to move patients from the Netherlands to Germany for health care. The country is considering allowing students return to in person classes for a few hours each week and might allow some business to reopen. But this has been heavily debated. In British Columbia, the province is at a crossroads, as they're describing it. In which they've documented B117 in seven schools just this past

weekend. The provincial officials have stated there's no need to implement changes to school reopening despite the recent cases. But that's been highly controversial. Cases there continue to grow in the province this past month. And recently, Newfoundland closed its schools in response to major upticks in cases there, largely B117. If you look at what happened there, they've had more cases in the last two weeks due to B117 than they'd had in the previous pandemic combined. So I just share all this with you about the B117 to say that's what we're looking at. That's what we think could very well be what would happen in the United States. And when I hear people say, well, it's not going to happen here, there is no one that has any information that would reliably tell us that. I think it's really a function of what can we learn from these countries. I didn't cover the issue with Israel, same problem there, etc.. Let me just say two last things quickly about the B1351 which is the variant from South Africa that we've worried about with regard to the ability to evade human immune protection. And the CDC is now reporting there are twenty two cases in 10 states here in the United States, far below that of what we've seen circulating for B117. Whether or not this will actually be driven here and actually compete against B117 is not clear. There is a recent paper in the Journal of the American Medical Association that discusses the B1351 driven outbreak in Zambia. And just this past week, The Washington Post carried a story about an outbreak in Tanzania, although officials there say they are still covid free, but it's due to a lack of testing. Finally, the last variant of concern that we've been talking about is the P1, the one from Brazil. And as of February twenty first, CDC still reports a very small number of cases, five cases in four states. We're still not getting a lot of information out of Brazil what's happening there, but this variant doesn't seem to be spreading. So I think this all comes back to one conclusion. It is about B117 and what it might do in the next five to 12 weeks. And for any of us that don't take note of what's happened in Europe, what's happening in the Middle East right now, I'm concerned that we will get caught surprised if this virus continues to do in the United States what I think it will do.

Chris Dall: [00:31:17] So let's talk about vaccines. First, there's some really interesting real world data coming out of Israel and the United Kingdom on the impact of the vaccines, both on symptomatic illness and on transmission. Also, as you noted, there's a new CIDRAP viewpoint out this week on reassessing the vaccine deployment strategy in the US in the face of the B117 surge that includes some notable names from the worlds of immunology and epidemiology. So, Mike, what is the data from Israel and the United Kingdom telling us and how does it relate to the viewpoint?

Michael Osterholm: [00:31:47] Well, first of all, it was a really a very special opportunity to, again, work with colleagues from both inside of CIDRAP and outside of CIDRAP to put this document together. The title of this report is Reassessing covid-19 Vaccine Deployment in Anticipation of the United States B117 Surge: Stay the course or Pivot? My co-authors on this are Angela Ulrich and Cory Anderson, very valuable members of this Osterholm Update team, as well as Eric Topol, who many of you know from Scripps, Bruce Gellin from the Sabin Foundation, Ruth Berkelman, professor emeritus from the Rollins School of Public Health in Atlanta, Marc Lipsitch, who is from Harvard, and Kris Moore, our medical director here at CIDRAP. And this group has worked very hard at trying to pull together what are the data that we have in terms of what might happen with a B117 surge? If it does happen, what might it look like? And what are we currently doing with our vaccine programs? And we open the document with what I think is a very, very important quote. It's one that we should all take very seriously. And it comes from Secretary Colin Powell. Who said some years ago, "Generally, you should act somewhere between p40 and p70, as I call it. Sometime after you obtained 40 percent of all the information you're liable to get, start thinking in terms of making a decision. When you have about 70 percent of all the information, you probably ought to decide because you may lose an opportunity in losing time." And I think that's where we're sitting right now with this issue here. Do you believe that B117 could possibly be a challenge here in the United States in the upcoming five to 12 weeks, or do you not? And again, what are your data for each of those? I've already laid out where I believe it falls and what the potential is for this resurgence. Let me just say that what we did is we came up with a series of pressing issues in this document and tried to provide as clearly as we could, a overview of where we're at and what we might consider. Number one pressing issue, the more transmissible sars-cov-2 B117 variant could lead to a significant surge in US cases in the next four to 12 weeks. If the B117 surge overlaps with low vaccine coverage, it will cause immense strain, an already burdened health care system threatening the level and quality of care available to our patients. The second pressing point, the immediate goal of public health agencies should be to reduce hospitalizations and deaths, as well as maintain the ability of the health care system to provide adequate health care services and minimize preventable suffering and deaths. Number three, age is the strongest risk factor for severe disease, hospitalization and death from covid-19. In the event of a case surge, the vast majority of hospitalizations and deaths would occur in adults sixty five years of age and older.

The fourth pressing issue, compared to when the messenger RNA vaccines were authorized, we now have more complete data regarding the B117 variants, including how they led to surges in other countries and they're currently rapidly increasing incidence in the US. Five, we have a short period to relieve the strain on the health care systems and save lives by strategically targeting vaccination to those at highest risk of hospitalization and death. So that was our overall thesis on this issue. Let me make it really clear that when we look at these issues, I have heard repeatedly, we have to follow the science. I think if anyone has been following the media the last several weeks, as I've been saying, there's a lot more information that can be gleaned that could be used. And you're seeing it get published now from England, from Israel, from even here in the United States, reanalysis of the previous studies. So for those who have been suggesting that whatever the FDA had in of by themselves weeks ago when they made a decision on emergency use authorization was the only data available, that's just simply not true. And we owe it to the public, we owe it to our colleagues to look at every piece of information we can. And just as we speak this week, more and more papers are coming out supporting the idea of what one dose versus two doses can be. So what we've come up with is really four primary activities that could support increased vaccination of those over 65 years of age, and that could therefore reduce the impact of a surge should it occur. All of these are contingent upon the fact that we do see sufficient data to support that a delayed second dose, delayed, I want to make that very clear. And we're not talking about delaying it months. We're talking about until we might get through a surge of B117, with my best professional judgment, would be no more than 10 to 12 weeks at most, as we've seen with other surges. So what are the four recommendations we're saying? Look at, look at this. Allocating the vaccine with people sixty five years of age or older given highest priority. We know that that is going to mean that those younger than sixty five will not have access that might otherwise have. And I understand the challenge with that. But if we're trying to keep the burden of health care service needs at a manageable level with a B117 surge, then that's where it's going to happen. Number two, deferring second doses of messenger RNA vaccines until after the surge. I'll talk about that more in the days ahead, but you're already seeing data coming forward from studies showing that there was quite good efficacy even after one dose. And let me be clear, I find it a little challenging when people say, "Well, we only have this much efficacy at one dose, but look what happened after two doses." As we're seeing with the AstraZeneca vaccine in Europe is if you didn't do a second dose, you still kept seeing first dose improvement over time, meaning that the

second dose didn't just automatically abbreviate what was then beginning to be a declining improvement in efficacy with dose one. It actually is like growing corn. It took months to get it to grow. Well, an immune response takes weeks and weeks. And so I understand that the importance of the second dose, I'm not at all suggesting it doesn't happen, but it's not appropriate to say that you somehow got a different result with the second dose because of that second dose only. We don't know that with first dose we wouldn't see ninety five percent protection over time. Then we also said authorize the use of half dose regimens for the Moderna vaccine. There's clear data that has come out showing that a 50 microgram dose, half of what is currently in the vaccines, resulted in a similar robust immune response and the correlates of protection compared to one hundred microgram dose. Imagine if we could have twice as much Moderna. And last but not least, the fourth recommendation we made was defer the second dose of an mRNA vaccine in people with confirmed covid-19 infections. More and more data has come forward supporting that a one dose may rapidly generate high levels of antibodies among individuals who previously had a confirmed infection. Why are we worried about at this point giving them a second dose within that three to four week period? So if we just looked at those, they very well could provide us with this cushion that we need in terms of the science. And let me tell you what we looked at in our report. We actually worked out five different scenarios. One where two doses were administered with 50 percent of the supply given to those over sixty five. Right now, it's only about a third over age sixty five getting vaccinated, two thirds under the age sixty five. Imagine two doses administered with one hundred percent of supply given to sixty five years of age and older. A deferred second dose with 30 percent of the supply going to those sixty five years of age and older. The fourth one was a deferred second dose, with 50 percent of the supply going to those sixty five years of age and older. And a deferred second dose with one hundred percent of supply given to sixty five years and older as our fifth final one. Let me just tell you that if you look at if we keep doing what we're doing now and we don't see any measurable improvement in the amount of vaccine available, we could expect with a B117 surge, and we've laid out all the different criteria, factors you can adjust them however you want to look at this, but without changing anything right now, we could expect one hundred and sixty one thousand hospitalizations and fifty six thousand deaths with a B117 surge. Much of that in that over age sixty five age group. If you look at the strategy we talked about, strategy five, where basically we in fact administer vaccines as a single dose and prioritize sixty five year olds covering them, we could drop that one hundred and sixty one thousand

hospitalizations to forty nine thousand hospitalizations and we could drop the number of deaths from sixty fifty six thousand to seventeen thousand. These are our mom and dads, our grandpa and grandmas, our brothers and our sisters, they're not just numbers. Now, if you don't agree with us and you think we're all wet, that's fine. But then come up with your own explanation, your own data. And this is a decision we need to make soon. And I know for the last month and a half I've been putting this out here and I recognize that that's not a welcomed discussion among many because they just want to stick with what we have. But now's the time for us in public health, I believe, to basically confront this idea that one, a B117 surge in the United States, I believe, is only becoming more of a potential reality. And I say potential reality every day. We're not seeing the B117s melt away. And we know that that will be particularly hard hit in the older age population. Right now our estimate is if we continue on the current track we're taking and we don't see a sizable increase of vaccine between now and the end of March, which we may get some towards the end of March, 30 million Americans sixty five years of age and older, out of fifty three million, 30 million will not have a drop of vaccine. Going into a surge, that's just wrong, that's wrong. So I think that this is really an important point. So our final recommendations on this is, we believe, an emergency meeting of VRBPAC, the FDA advisory group, and the ACIP, the CDC advisory group, should be convened to urgently review the existing data, epidemiology, virology, immunology, the modeling, all the data to determine how best to use the current vaccine supply and the supply that will become available in the coming months. I can only hope that suddenly somebody would say, "Oh, my, we're going to give you 10 million doses a day, not 1.7 million." That would help. This should include all published unpublished data available for all the vaccine clinical trials for vaccines authorized for emergency use by the FDA or vaccines that may be authorized in the next two to six weeks. No longer accept the fact we have to follow the science as code for we already looked at this once we're done looking at it, we don't have any new additional data. What I said weeks ago is now starting to actually become reality, that there were a lot of data out there that are now being published that we have available to us. Number two, we should optimize the current vaccine supply in preparation of a possible B117 surge. VRBPAC and ACIP should consider whether existing data support age-based allocation with the highest priority given to adults sixty five years of age and older, deferring second doses of mRNA vaccine to after the surge, and deferring the second dose of mRNA vaccines in individuals confirmed previous covid-19 infections and/or the authorization and the use of a half dose regimen for the Moderna vaccine. Number three, we believe if the

data supports a change of the current authorizations or recommendations, the FDA should revise its authorization determination as soon as possible. And finally, a coordinated public communications campaign must be undertaken to provide clear and consistent messaging to the public regarding any change in the vaccine schedule or prioritization groups due to the deferment of second doses of vaccines. I understand this would be controversial. There'll be some saying, "Wait a minute, I'm not getting my dose now that I thought I could get." We're not telling anyone who's already had one dose they can't get their second dose. We're saying only new people enrolled going forward would not get their second dose until after the surge. And I think that that's in the sense of utilitarian model of trying to look at how to do the most good for the most people, I still believe that that's the case. I would close it by just using the example I used last week. I'm sitting across the table from my grandparents. Both of them have underlying health conditions. Both are in their late 70s. I have two doses of vaccine. Do I decide with them to give one dose to each day, or give two doses to one and none of the other? How do we decide? I believe the data clearly support right now we could do great benefit and give my grandpa and grandma a better chance of being around by giving them each one dose than to give two doses to one, which means you may very well not even get ill at all. But the other one could likely die if you got infected. So I hope that this adds some clarity. I know it's still a controversy. I know that we don't know if B117 is going to take off. I don't know that. But as Secretary Powell said, "We don't have the luxury of knowing all of that." But if we do wait and a surge does occur, it'll be far too late for us to react and respond.

Chris Dall: [00:46:24] Now to the issue that I raised in the intro, we're seeing a growing number of people who have received both doses of the vaccine and want to know if they still have to follow covid-19 precautions or how strictly they need to follow them. So here's a listener email we received that I think captures what many people want to know. Michael writes, "My wife, Gail, and I have really enjoyed your informative podcasts and updates. I was wondering if you would address how we should act after we get both of our covid shots and then wait the two to three weeks for it to build immunity. Is it safe to fly across the country to visit family members, some of whom have been vaccinated and some who have not? Can we go to restaurants and stores? We would still wear masks in public and distance as best we can. We're both around 70 years old and have had our first covid shots. We're just wondering how to act in the

future." So Mike, do we have any answers for these types of questions yet, or do we need more information on whether the vaccines can reduce transmission?

Michael Osterholm: [00:47:19] For a number of months, I have been raising the issue right here on this podcast that we have to figure out how to learn to live with this virus. And what I mean by that is, is that we won't have all the perfect answers. We won't have all the perfect protection. But I don't believe society will continue to wear masks, distance themselves, refuse not to travel. It's just not going to happen. And what we have to understand has public health professionals, our job is to protect the public, give them the best science we have. And right now we don't have the science at our fingertips that says if you get two doses, you're not only protected ninety five percent of the time, but you don't transmit to others. And we keep kind of, in a sense, getting behind that message of we don't know if you don't get an asymptomatic infection and transmit to others. I think at some point we're going to have to accept the fact that once you've been vaccinated and I believe right now, I feel comfortable with even one dose, but I would agree, let's get two doses in, then in fact, we can start to change how we relate to people. If I personally, this is me personally, it is not a public health recommendation, there will be those who will be very upset with me because I will appear to be undercutting public health and science, but my partner and I both were vaccinated and another couple were both vaccinated, I would have a lovely, wonderful evening with them at dinner in one of our homes. I would find that to be completely, completely safe relative to life itself. Because it can't happen now that I'm going to live the rest of my life never being able to or willing to have those kinds of situations again, society will just simply not accept that. So what I have urged is that a blue ribbon panel, a group like under the support of the CDC somewhere, bring all these issues together and say, "How are we going to decide to live with this virus?" Don't tell me that for the next 90 days after you've been vaccinated, if you're exposed, you don't have to quarantine. OK, tell me then, what is the long term plan? Is it one hundred and twenty days? One hundred and eighty days? Well, we're going to get more data. How are we going to get more data? When will I know how much data you're going to have? Do I have to go to 90 days and hit a cliff and say, "Oh, if I get exposed on day ninety one now I got to be quarantined?" We don't have a framework. We don't have a sense of what it means to live with this virus. And I understand the frustrations. I understand the challenges of people who are now living in this partially vaccinated world, but mostly not. And what we need is a game plan. We need a plan. As much as we need a plan for

testing, we need a plan for vaccinating people. We need a plan for living. And we have to raise these challenges, when is it going to be safe enough for us to go back to church or to go into other settings? And I'm not even advocating we open it up today. I'm just asking the question, what are the criteria we're going to use? How do you unring the bell? And the public would even, I think, do much better if they just understood what are the goalposts we're going to use? Right now, I feel like, you know, on any one given day, we move the goalpost all around the field. And so what do we do if you've had two doses of vaccine, does it matter what your age is? What do you do in terms of being in public? Understand the political issues of not masking or masking. We've made that such a political issue. You know, people's lives have ended because they've been shot and killed by somebody who got into an argument about whether they were masked or not. Do I suddenly now have a new card with me that says I've had two doses of vaccine? What if I am part of that group that doesn't have protection, meaning vaccines are ninety, ninety five percent efficacy? Does that mean because of that small group, we're never going to let anybody back into the public domain as they once were? What happens around the world? When I travel, you know, we know that many countries right now are not going to have access to vaccine for a long time, does it matter if what's happening now is that one of the variants that defeats the immunity that we have is now circulating? Now does that change whether what I do is a vaccinated person actually is there? So we need a game plan. We need to get together. We need to have scientists. We need to have elected officials. We need to have business people. We need to have sixty eight year old grandparents all contributing to that. We need to have teachers. We need to have all the people. We need to have the restaurant owners. Let's all get together, let's figure out what it is that we want and need and information and decision making and then lay out how we're going to get there, then at least I know that somebody is going to make a decision. Can I get together with that other couple or not? We're all going to start making our own decisions anyway. It would surely be helpful if people felt like they had the support of what science we have, and if we don't have the science information, how do we collect it? Or if we don't even at this point feel like we can collect the information, how are we going to make a decision? And to say when is it safe for me to go hug my grandkids? When they all get vaccinated and I get vaccinated, what is that? So I know this sounds like I'm rambling, but this is a very emotional moment for me in the sense of I feel this pain, I feel this indecision, I feel this confusion. And we're at a place right now between the variants making things more complicated, between the vaccines as rolling out being exciting and all of us experiencing a year's

worth of a pandemic that has taken five hundred thousand plus people from us. How do we move on? So, you know, we'll help however we can at CIDRAP. We are more than willing to put the issues on the table and systematically work through them where I think society in general has to be at the table to help us work on that. So I didn't really answer your question other than to say that I am certain that when my partner and I are both fully vaccinated and we have dear friends who are both fully vaccinated, no way in hell are you going to keep me from not having one of the most wonderful dinners of my life with them. I am going to do that. And if that means somehow I did something wrong, then I don't know how the rest of the world is going to continue to live with this pandemic if we have to believe we can only do things with masks on or we cannot be together because we haven't podded. I just think that's not going to work.

Chris Dall: [00:54:24] The wonderful and inspiring pandemic acts of kindness keep rolling in from our Osterholm Update listeners, and we have a really nice one this week that comes from a listener in Texas, which, as you noted earlier, Mike, had a really, really rough week. So can you share with our audience?

Michael Osterholm: [00:54:40] Well, this is one of those very special ones of a mother and a daughter. You know, I told you last week, I love when kids get involved, but this is an adult daughter. But this is a very, very proud mother and she should be. This is from Bonnie. And Bonnie wrote, she said, "Dear Dr. Osterholm, I work at a Texas hospital and I did so during the Ebola crisis and thought that would be the defining infectious disease of my life. My act of kindness is actually my twenty seven year old daughter's. We live near a couple homeless encampments. Last Friday, when my daughter heard the temps were going to be dangerously low in Dallas, she got very worried about them. She's a marginally employed millennial. So she posted on Facebook that she'd like to help but didn't have the means. Her post was very inspirational and before noon on Saturday she had sixteen hundred dollars and finally ended up with over two thousand. She went to two Wal-Mart and Costcos and bought blankets, socks, hats, scarves, sweatshirts, warmers and masks. She distributed them to the encampments and a couple of warming stations. She then donated the rest of the money to a church who opened their doors to the homeless and a soup mobile. I'm very proud and humbled by this extraordinary young woman with a big heart. In this short, long week here in Dallas, I'm sure there are people grateful for anything to keep them warm. Bonnie." Bonnie, you should be very, very proud of your daughter, and I just bet you, if I could, I think she's,

as they would say here in the upper Midwest, a chip off the old block. I just suspect that. So thank you very much for sharing that incredible act of kindness. I appreciate it more than I can tell you, as we do all here at CIDRAP. And again, please keep sending these acts of kindness, but most of all, keep doing them. Keep doing them. Be kind, be gentle, be kind.

Chris Dall: [00:56:41] And if you want to share your pandemic act of kindness with us, please email us at OsterholmUpdate@umn.edu. Your closing thoughts today, Mike.

Michael Osterholm: [00:56:51] Well, we're in a tough time, as I pointed out, we're waiting, we're watching and we're waiting. We're watching and we're waiting. And that's hard. That's hard. That's real hard. We want to feel the excitement of these case numbers dropping that, I must remind you, they're only dropping to levels that are still exceeded previous periods when we thought the house was on fire. We want not to have to deal with a whole new episode, a surge of covid cases that could be every bit as dangerous as we've experienced already. The vaccines are here. Wait a minute. That's not what's supposed to happen. And so I think that from that perspective, it's a tough time. And our mental health is wearing down more and more every day. Every week. I see it. I feel it. I know it myself personally. So, you know, I decided this week to go back and pull out a classic that I think fits the moment. The lyrics for this song that I've chosen today, actually was one I used on September 10th in episode twenty three. And that title for that week's episode was covid-19 Mental Health. This is a nineteen seventy one co-hit, both Carole King included in her Tapestry album and James Taylor on his mudslide Slim and the Blue Horizon. You've Got a Friend. As I shared with you before, this was a Grammy Award for both Taylor, he received the best male pop vocal performance. And for Carole King, she won it for Song of the Year. They each recorded the song literally back to back with the same bands. It was a remarkable experience. It's one of those ones that for me means so much. In nineteen seventy one when this was released was at that time in my life when I was at the very dysfunctional stage in my family, as I've shared with you in past podcasts, where my father had been kicked out, we were barely getting through it. But I had that LP, Mudslide Slim and The Blue Horizon from James Taylor and an old old record player and I can remember day after day listening to this. Today, I think it's a good one for us to listen to. It's one that tells us we're going to get through this. You've Got a Friend written by Carole King in this case, sung by James Taylor. "When you're down and troubled and you need a helping hand

and nothing no, nothing is going right. Close your eyes and think of me, and soon I will be there to brighten up even your darkest nights. You just call out my name and, you know, wherever I am, I'll come running. Oh, yeah, baby, to see you again. Winter, spring, summer or fall. All you've got to do is call and I'll be there. Yeah, yeah, yeah. You've got a friend. If the sky above you should turn dark and full of clouds and that old north wind should begin to blow. Keep your head together and call my name out loud now, soon I'll be knocking upon your door. You just call out my name and you know, wherever I am, I'll come running. Oh, yes, I will. See you again. Winter, spring, summer or fall. Yeah. All you got to do is call and I'll be there. Yeah, yeah, yeah. Hey, ain't it good to know that you've got a friend. People can be so cold, they'll hurt you and desert you well, they'll take your soul if you let them. Oh yeah, but don't let them. Just call out my name and, you know, wherever I am, I'll come running to see you again. Oh, baby, don't you know about winter, spring, summer or fall? Hey, now all you've got to do is call Lord, I'll be there. Yes, I will. You've got a friend. You've got a friend. Yeah, ain't it good to know you've got a friend. Ain't it good to know you've got a friend? Oh, yeah yeah. You've got a friend." Sally, this one was for you, too. And thank you all so very much, we all need friends right now. Be kind and be patient. At the same time, know that it's OK to ask tough questions, it's OK right now to feel a sense of disease that you're not yet felt. We're at that point in that pandemic where it's just the ability to acknowledge that and to know that it's OK. We're all feeling that. But we also can all be friends. And that's right now, if there's any act of kindness you can do or anything that will help this world find someone this week somehow to be a friend. And it'll make a lot more sense out of all this crazy stuff with vaccines and variants and all these other things we deal with. Thank you so, so much for spending your time with us. You're very special people. Thank you.

Chris Dall: [01:02:20] Thanks for listening to this week's episode of the Osterholm Update. If you're enjoying the podcast, please subscribe on your podcast platform of choice and write a review. And be sure to keep up with the latest covid-19 news by visiting our website CIDRAP.umn.edu. The Osterholm update is produced by Maya Peters. Cory Anderson and Angela Ulrich, are our researchers, and Randy and Eric Olson are Dr. Osterholm's story consultants.